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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,852	09/10/2003	Ray Cole	BMC530/4-002CON2US	5193
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VINSON & ELKINS L.L.P. 1001 FANNIN STREET 2300 FIRST CITY TOWER HOUSTON, TX 77002-6760			TRUONG, CAM Y T	
			ART UNIT	PAPER NUMBER
			2162	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,852

Applicant(s)

COLE, RAY

Examiner

Cam Y T. Truong

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 22-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-30 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 4 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Applicant has amended claim 1-2, 5, 8, 9, 22, 25, and added claims 28-30 in the amendment filed on 5/2/2006. Claims 1-14 and 22-30 are pending in this Office Action.

Response to Arguments

2. Applicant's arguments filed 5/2/2006 have been fully considered but they are not persuasive.

First, applicant argued that Pereira does not explicitly teach the claimed limitation "baseling a database table to obtain information related to storage characteristics (e.g., the average row length of the rows in the table and the average free space in the table). In response, this claimed limitation is not in the claim 1. However, Pereira teaches the baseling tables in database to obtain information such as row length, free space in the tables (table 1, col. 5, lines 65-67; col. 6, lines 1-5).

Second, applicant argued that the combination of Pereira and Draper does not explicitly teach the claimed limitation "retrieving storage information placed within the transaction log".

In response to applicant's argument, Drapper teaches retrieving transactions from the transaction log, updating objects which are stored in database, and tracking object in log database. In particular, during an accessing step 116 an update history structure is created or modified when the transaction is added or modified. The update history structure may be implemented using an unreplicated attribute of each log database object, an update tracking object in the log database. The update history

structure for transactions shows that the system monitors transactions in the transaction log. Transactions are represented as entries (col. 36, lines 35-55; col. 3, lines 10-25; col. 37, lines 13-22; col. 36, lines 10-67; col. 35, lines 25-50).

Finally, applicant argued that there is no motivation to combine the two references.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Draper's teaching of retrieving transactions from the transaction log, updating objects which are stored in database, and tracking object in log database to Pereira's system in order to provide a system and method which are suited for use with systems and methods for transaction synchronization and to identify and then modify or remove certain apparently inconsistent operations to improve the synchronization process (col. 2, lines 15-40).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-6, 8-10, 12-13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Pereira (US 6122640) in view of Draper et al (or hereinafter "Draper") (USP 6192365).

As to claim 1, Pereira teaches the claimed limitations:

"locking a particular table to be baselined" as locking a source table. The source table is reorganized by using a reorganization process that has a free tablespace (blocks) available that is large enough to hold the source table plus the anticipated growth of the table during the reorganization. The above information shows that the source table is organized or baselined (col. 7, lines 20-25; col. 10, lines 59-62);

"baselining a table contained in the database, wherein the storage information comprising the average row length of the rows in the table and the average free space in the table is obtained" as (col. 5, lines 40-45; col.2, lines 21-40);

"unlocking the table after it is baselined" as (col. 7, lines 20-25; col. 10, lines 59-62).

Pereira does not explicitly teach the claimed limitation “making an entry into a transaction log, wherein the entry contains the storage information; retrieving the storage information from the transaction log; periodically updating the storage information by monitoring subsequent entries in the transaction log”.

Draper teaches retrieving transactions from the transaction log, updating objects which are stored in database, and tracking object in log database. In particular, during an accessing step 116 an update history structure is created or modified when the transaction is added or modified. The update history structure may be implemented using an unreplicated attribute of each log database object, an update tracking object in the log database. The update history structure for transactions shows that the system monitors transactions in the transaction log. Transactions are represented as entries (col. 36, lines 35-55; col. 3, lines 10-25; col. 37, lines 13-22; col. 36, lines 10-67; col. 35, lines 25-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Draper's teaching of retrieving transactions from the transaction log, updating objects which are stored in database, and tracking object in log database to Pereira's system in order to provide a system and method which are suited for use with systems and methods for transaction synchronization and to identify and then modify or remove certain apparently inconsistent operations to improve the synchronization process (col. 2, lines 15-40).

As to claim 2, 9, Pereira teaches the claimed limitation “making an entry into the transaction log that the table is to be baselined” as (col. 4, lines 1-5);

“preparing a storage area to receives the storage information for the table” as (fig. 3).

As to claims 3, 10, Pereira teaches the claimed limitation “sending the storage information to a requesting entity, wherein a portion of the storage information is row identifications; deleting the row identifications, wherein the requesting entity maintains the rows identifications” as (col. 8, lines 50-55; col. 10, lines 28-29).

As to claims 5, 12, Pereira teaches the claimed limitation “the storage information includes information reflecting a block count, number of rows, average row length, average free space, and number of chained/migrated rows in the table” as (col. 10, lines 1-20).

As to claim 6, Pereira teaches the claimed limitation “a function native to the database performs the baselining step, and initial routine performs making an entry steps” as (col. 1, lines 40-55). Pereira does not explicitly teach the claimed limitation and a monitoring routine performs the retrieving and periodically updating steps”. Draper teaches during an accessing step 116 an update history structure is created or modified when the transaction is added or modified. The update history structure may be implemented using an unreplicated attribute of each log database object, an update

tracking object in the log database. The update history structure for transactions shows that the system monitors transactions in the transaction log. Transactions are represented as entries (col. 36, lines 35-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Draper's teaching to Pereira's system in order to improve the synchronization process or to maintain objects during making transactions in transaction log (col. 2, lines 15-40).

As to claim 8, Pereira teaches the claimed limitations:

"a processor" as (col. 19, lines 34-35);

"memory units, electrically connected to the processor, wherein the database system program directs the processor to retrieve portions of the database from the memory units for manipulation by the processor, and the storage information program directs the computer system to operate in a mode of operation to compute and monitor the storage information" as (fig. 9, col. 19, lines 30-50).

"a table contained in the database is locked, thereby preventing modifications of the particular table" as the source table contained in the database is locked to prevent transactions from occurring to the source table (col. 3, lines 65-67; col. 4, lines 1-5);

"the table is baselined by the database system program" as the source table of the database is reorganized by a program (col. 3, lines 60-67; col. 19, lines 30-50),
"wherein storage information comprising the average row length of the rows in the table

and the average free space in the table is obtained” as row data is stored in the source table (fig. 9; col. 2, lines 21-40);

“an entry into a transaction log is made, wherein the entry contains the storage information” as a trigger on a source table to record transactions into a transaction log table (col. 4, lines 15-17);

“the table is unlocked, where access to the table is restored” as unlocking the source table to allow making any transactions in the source table indicates the access is restored (col. 4, lines 4-5, fig. 9A);

Pereira does not explicitly teach the claimed limitation “an entry into a transaction log is made, wherein the entry contains the storage information; the monitoring routine retrieves the storage information from the transaction log; periodically updates the storage information by monitoring subsequent entries in the transaction log”.

Drapper teaches retrieving transactions from the transaction log, updating objects which are stored in database, and tracking object in log database. In particular, during an accessing step 116 an update history structure is created or modified when the transaction is added or modified. The update history structure may be implemented using an unreplicated attribute of each log database object, an update tracking object in the log database. The update history structure for transactions shows that the system monitors transactions in the transaction log. Transactions are represented as entries (col. 36, lines 35-55; col. 3, lines 10-25; col. 37, lines 13-22; col. 36, lines 10-67; col. 35, lines 25-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Draper's teaching of retrieving transactions from the transaction log, updating objects which are stored in database, and tracking object in log database to Pereira's system in order to provide a system and method which are suited for use with systems and methods for transaction synchronization and to identify and then modify or remove certain apparently inconsistent operations to improve the synchronization process (col. 2, lines 15-40).

As to claim 13, Pereira teaches the claimed limitation "the database system program is a database system program produced by Oracle Corporation" as (col. 5, lines 53-60).

5. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pereira in view of Draper and further in view of Bamford (US 5870758).

As to claim 7, Pereira teaches the claimed limitation "repeating the baselining and making an entry steps for additional tables as specified by a user" as repeating reorganizing the resource table and making an entry for a table and not tables (fig. 9B).

Bamford teaches a system contains many transaction tables. Each transaction table includes a plurality of slots, where each slot can hold an entry that corresponds to a transaction. Each entry contains a sequence number, a status indication and a

snapshot number for its corresponding transaction. The above information shows that each transaction table is made a entry (col. 8, lines 55-63; col. 8, lines 55-67).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Bamfor's teaching to Pereira's system and Draper's system in order to maintain information stored in a database.

As to claim 14, Pereira teaches the claimed limitation "baseling each table in the database" as (col. 3, lines 3, lines 45-50). Nykiel does not explicitly teach the claimed limitation "means for making an entry into the transaction log for each table baselined".

Bamfor teaches a transaction table includes a plurality of slots, where each slot can hold an entry that corresponds to a transaction. Each entry contains a sequence number, a status indication and a snapshot number for its corresponding transaction (col. 8, lines 55-63).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Bamfor's teaching to Nykiel's system and Draper's system in order to maintain information stored in a database.

6. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pereira in view of Bamford (US 5870758).

As to claim 7, Pereira teaches the claimed limitation "repeating the baselining and making an entry steps for additional tables as specified by a user" as repeating reorganizing the resource table and making an entry for a table and not tables (fig. 9B).

Bamfor teaches a system contains many transaction tables. Each transaction table includes a plurality of slots, where each slot can hold an entry that corresponds to a transaction. Each entry contains a sequence number, a status indication and a snapshot number for its corresponding transaction. The above information shows that each transaction table is made a entry (col. 8, lines 55-63; col. 8, lines 55-67).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Bamfor's teaching to Pereira's system system in order to maintain information stored in a database.

As to claim 14, Pereira teaches the claimed limitation "baseling each table in the database" as (col. 3, lines 3, lines 45-50). Nykiel does not explicitly teach the claimed limitation "means for making an entry into the transaction log for each table baselined".

Bamfor teaches a transaction table includes a plurality of slots, where each slot can hold an entry that corresponds to a transaction. Each entry contains a sequence number, a status indication and a snapshot number for its corresponding transaction (col. 8, lines 55-63).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Bamfor's teaching to Pereira's system in order to maintain information stored in a database.

Allowable Subject Matter

7. Claims 4, 11, 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 4, 11 and 24, none of the available prior art of record teaches or fairly suggest “adding row identifications to the storage information when a first particular entry in the transaction log indicates a new chained row and removing row identifications from the storage information when a second particular entry indicates a changed row has been removed” in the specific combination as recited in claims 4, 11 and 24.

8. Claims 22, 28-30 are allowed.

The dependent claims 23-27, bring definite, further limiting, and fully enabled by the specification are also allowed.

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

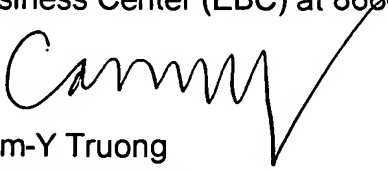
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cam-Y Truong
Patent Examiner
Art Unit 2162
2/2/2006